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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,471	03/16/2007	Jens Doppelhamer	1034193-000054	5185

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EXAMINER

NICKERSON, JEFFREY L

ART UNIT	PAPER NUMBER
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2142

NOTIFICATION DATE	DELIVERY MODE
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04/02/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/587,471	Applicant(s) DOPPELHAMER ET AL.	
	Examiner JEFFREY NICKERSON	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10 September 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to Application No. 10/587,471 filed nationally on 16 March 2007 and internationally on 28 January 2005. The preliminary amendment, which provides change to claims 1-7 and the specification and adds claim 8, is hereby acknowledged. Claims 1-8 have been examined.

Drawings

2. The drawings are objected to under 37 CFR 1.84(p) because the drawings are not in the English language. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to under 37 CFR 1.72(b) because it contains implied phraseology. The first sentence of the abstract contains the phrase "The invention relates to", which falls into the category of implied phraseology. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding claims 1 and 5, the phrase "existing services (web services 5)" in line 6 renders the claim indefinite because it is unclear whether the limitation in parenthesis is part of the claimed invention. Also, the phrase "in particular the Internet or a LAN" in line 4 renders the claim indefinite because it is unclear whether the limitation is part of the claimed invention. See MPEP § 2173.05(d). For purposes of further examination, the examiner will consider the former phrase to be "existing web services", since the preamble distinctly refers to "web services". And for purposes of further examination, the examiner will consider the latter phrase to be "...local proxies in the Internet or a LAN...".

Regarding claims 2-4 and 6-8, these claims inherit the indefiniteness of their parent claim(s).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei (US 5,778,228), and further in view of Shakib et al (US 6,321,274 B1).

Regarding claim 1, Wei teaches a system for communication between remote objects which are provided with service providers whose methods can be accessed as web services (Wei: col 1, lines 19-41 specifies server-side services accessed), and client-end local proxies (stubs) (Wei: col 1, lines 19-41 specifies client stubs for RPCs) in the Internet or a LAN (Wei: col 3, lines 1-10 specify LANs or plurality of interconnected LANs), with:

a general service (generic RPC server stub) being installed in addition to the existing web services at the service provider end and being designed to switch one or more service calls from a client to the available services, and to transmit one or more response messages to the client (Wei: abstract; col 5, lines 49-53; See also Figure 6, item 616 into 620);

at the client end, in addition to the other local proxies, a general proxy (generic client stub) being installed which is designed to carry out service calls, and to return

response messages to the applications (Wei: abstract; col 5, lines 38-48; See also Figure 6, item 612 into 610).

Wei does not teach an optimization layer at the client end being designed to carry out client end optimization and combine call groups.

Shakib, in a similar field of endeavor, teaches an RPC handler layer that bundles client RPC calls (Shakib: abstract; col 3, lines 45-49; See also Figure 2, items 135 and 150; Figure 3, all instances depict flow of datagram bundling).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shakib for bundling RPCs. The teachings of Shakib, when implemented in the Wei system, will allow one of ordinary skill in the art to use generic client and server stubs while bundling RPCs. One of ordinary skill in the art would be motivated to utilize the teachings of Shakib in the Wei system in order to reduce network traffic by eliminating redundant RPCs.

Regarding claim 2, the Wei/Shakib system teaches wherein the optimization layer contains at least one cache, with whose aid service calls can be avoided or delayed (Shakib: col 1, lines 34-48 specify delaying transmission of RPC requests, which must inherently be stored in some type of buffer/queue/cache).

Regarding claim 5, this method claim contains limitations corresponding to those of claims 1 and 2, and the same rationale of rejection is used, where applicable.

10. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei (US 5,778,228) and Shakib et al (US 6,321,274 B1), and in further view of Krishnamurthy et al (US 6,578,113 B2).

Regarding claim 4, the Wei/Shakib system teaches wherein the proxy is a local client proxy and wherein transmissions are of call groups and wherein reverse transmissions responses from the server. (Wei: abstract; Shakib: abstract).

The Wei/Shakib system does not teach techniques for maintaining cache coherency between the proxy and the server.

Krishnamurthy, in a similar field of endeavor, teaches wherein the proxy cache piggybacks update and validation requests to the server onto client transmissions (Krishnamurthy: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Krishnamurthy for piggybacking validation requests. The teachings of Krishnamurthy, when implemented in the Wei/Shakib system, will allow one of ordinary skill in the art to piggyback cache validation requests onto bundled RPCs. One of ordinary skill in the art would be motivated to utilize the teachings of Krishnamurthy in the Wei/Shakib system in order to reduce network traffic while maintaining cache coherency.

Regarding claim 6, this method claim contains limitations corresponding to those of claims 4, and the same rationale of rejection is used, where applicable.

11. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei (US 5,778,228) and Shakib et al (US 6,321,274 B1), and in further view of Kumar et al (US 7,130,890 B1).

Regarding claim 3, the Wei/Shakib system teaches wherein the client is designed by means of an optimization layer and the general proxy to initiate communication with a service provider (Wei: abstract; Shakib: abstract).

The Wei/Shakib system does not teach initiating communication without any call from a client application in order to update stored information.

Kumar, in a similar field of endeavor, teaches initiating communication without any call from a client application in order to update stored information (Kumar: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Kumar for monitoring user request tendencies and prefetching resources automatically without user initiation. The teachings of Kumar, when implemented in the Wei/Shakib system, will allow one of ordinary skill in the art to RPC requests and prefetch resources. One of ordinary skill in the art would be motivated to utilize the teachings of Kumar in the Wei/Shakib system in order to spread out updating cached resources so that resource requests are not bursty.

Regarding claim 7, this method claim contains limitations corresponding to those of claims 3, and the same rationale of rejection is used, where applicable.

12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wei (US 5,778,228), Shakib et al (US 6,321,274 B1), and Krishnamurthy et al (US 6,578,113 B2), and in further view Kumar et al (US 7,130,890 B1).

Regarding claim 8, the Wei/Shakib/Krishnamurthy system teaches wherein the client is designed by means of an optimization layer and the general proxy to initiate communication with a service provider (Wei: abstract; Shakib: abstract).

The Wei/Shakib/Krishnamurthy system does not teach initiating communication without any call from a client application in order to update stored information.

Kumar, in a similar field of endeavor, teaches initiating communication without any call from a client application in order to update stored information (Kumar: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Kumar for monitoring user request tendencies and prefetching resources automatically without user initiation. The teachings of Kumar, when implemented in the Wei/Shakib/Krishnamurthy system, will allow one of ordinary skill in the art to RPC requests and prefetch resources. One of ordinary skill in the art would be motivated to utilize the teachings of Kumar in the Wei/Shakib/Krishnamurthy system in order to spread out updating cached resources so that resource requests are not bursty.

Cited Pertinent Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Wills et al ("Study of Piggyback Cache Validation for Proxy Caches in the World Wide Web", December 1997) discloses a method for piggyback cache validation for proxy caches.
- b. Chidambaran et al (US 6,324,567 B2) discloses a method and apparatus for bundling client commands sent to a server.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Examiner, Art Unit 2142

/Andrew Caldwell/
Supervisory Patent Examiner, Art
Unit 2142